AMENDMENTS

In The Specification:

Please amend paragraph 0007 as follows:

Some direct conversion receivers employ what is referred to as a "subharmonic mixer" to downconvert the received RF signal directly to a baseband signal from which the data contained in the signal may be ~~reliable~~ reliably extracted. Conventional direct downconversion systems typically generate in-phase (I) and quadrature (Q) outputs using signals that are separated in phase by 90°. Because a subharmonic mixer effectively performs a multiply-by-two to the path containing the LO signal, the subharmonic mixer typically requires signals that are separated in phase by 45 degrees (°). Unfortunately, accurately generating the 45° offset phase signals has proven troublesome.

Please amend paragraph 0032 as follows:

Downconverter 178 receives a frequency reference signal, also called a "local oscillator" signal, or "LO," from synthesizer 200, via connection 180. The LO signal instructs the downconverter 178 as to the proper frequency to which to downconvert the signal received from LNA 176 via connection 182. Downconverter 178 sends the downconverted signal via connection 184 to channel filter 186, also called the "IF filter." Channel filter 186 filters the downconverted signal and supplies it via connection 188 to amplifier 190. The channel filter 186 selects the one desired channel and rejects all others. Using the GSM system as an example, only one of the one-hundred twenty-four (124) contiguous channels is actually to be received. After all channels are passed by receive filter 168 and downconverted in frequency by downconverter 178, only the one desired channel will appear precisely at the center frequency of channel filter 186. The synthesizer 200, by controlling the local oscillator frequency supplied on connection 180 to downconverter 178, determines the selected channel.

Please amend paragraph 0035 as follows:

The downconverter 178 includes a pair of limiters 208 and 224, and a pair of mixers 214 and 218. In the case of a DCR, the mixers 214 and 218 are subharmonic mixers. The received

radio frequency (RF) signal is supplied via connection 174 to the low noise amplifier 176. The low noise amplifier 176 amplifies the received signal and provides, on connection 182, the received radio frequency signal to mixers 214 and 218. The signals supplied from the limiter 208 to the mixer 214 and from the limiter 224 to the mixer 218 are referred to as the "local oscillator" or "LO" signals. In the case of a DCR in which subharmonic mixers are used, it is desirable that the LO signal on connection 180 comprise eight (8) vectors of 45° phase separated signals. As will be described below, the amplitude matched signal generator 300 provides highly accurate amplitude matched 45° phase separated signals to the mixers 214 and ~~214~~ 218.

Please amend paragraph 0052 as follows:

Due to the operation of the peak detectors 362 and 364 and the comparator 372 (FIG. 4) the vectors on connections 352, ~~254~~ 354, 356, and 358 are all substantially equal in magnitude and offset in phase by ninety degrees. However, when the ninety degree offset vectors are combined in the adder element 402 the resulting 45°, 135°, 225° and 315° vectors, while being equal to each other in magnitude, are not equal in magnitude to the original 0°, 90°, 180° and 270° vectors. For example, if the magnitude of the vectors on connections 352, 354, 356 and 358 are equal to 1, then the magnitude of the vectors on connections 412, 414, 416 and 418, will have a magnitude equal to $\sqrt{2}$. Unfortunately, if these eight vectors are used by the subharmonic mixers ~~212~~ 214 and 218 (FIG. 2), then the amplitude mismatch will likely cause sub optimal system performance. Therefore, the vectors on connections 352, 354, 356 and 358 are supplied to the scaling element 430. The scaling element 430 scales the vectors on connections 352, 354, 356 and 358 by a factor equal to $\sqrt{2}$. In this manner, the 0°, 90°, 180° and 270° vectors on connections 432, 434, 436 and 438, respectively, are equal in magnitude to the 45°, 135°, 225° and 315° vectors on connections 412, 414, 416 and 418, respectively, and are separated in phase by 45°.